AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Withdrawn) A polypeptide possessing a CDase activity derived from a native CDase by addition of an amino acid sequence, with the proviso that said polypeptide has no UPRtase or thymidine kinase activity, wherein the amino acid sequence, added to the native CDase, derives from a polypeptide possessing an UPRTase activity.

2. (Withdrawn) A polypeptide according to claim 1, wherein the amino acid sequence, added to the native CDase, is linked to the C terminal end of the native CDase.

3. (Withdrawn) A polypeptide according to claim 1 wherein said polypeptide possessing an UPRTase activity derives from a yeast UPRTase, in particular that encoded by the *Saccharomyces cerevisiae FUR1* gene.

4. (Withdrawn) A polypeptide according to claim 3, wherein the amino acid sequence, added to the native CDase, derives from an amino acid sequence which is substantially that depicted in SEQ ID NO: 2, starting at the Ser residue in position 2 and finishing at the Val residue in position 216.

5. (Withdrawn) A polypeptide according to claim 4, wherein the amino acid sequence, added to the native CDase, is as depicted in SEQ ID NO: 2, starting at the Ser residue in position 2 and finishing at the Val residue in position 216.

6. (Withdrawn) A polypeptide according to claim 1, wherein said native CDase is a yeast CDase.

7. (Withdrawn) A polypeptide according to claim 6, wherein the native CDase comprises an amino acid sequence which is substantially as depicted in SEQ ID NO: 1, starting at the Met residue in position 1 and finishing at the Glu residue in position 158.

8. (Withdrawn) A polypeptide according to claim 7, wherein the native CDase comprises an amino acid sequence as depicted in SEQ ID NO: 1, starting at the Met residue in position 1 and finishing at the Glu residue in position 158.

9. (Withdrawn) A polypeptide according to claim 6, wherein it comprises an amino acid sequence which is substantially as depicted in SEQ ID NO: 1, starting at the Met residue in position 1 and finishing at the Val residue in position 373.

10. (Withdrawn) A polypeptide according to claim 9, characterized in that wherein it comprises an amino acid sequence as depicted in SEQ ID NO: 1, starting at the Met residue in position 1 and finishing at the Val residue in position 373.

11. (Withdrawn) A polypeptide according to claim 1, exhibiting a CDase activity which is higher than that of said native CDase.

12. (Currently Amended) An isolated nucleotide sequence encoding a fusion protein comprising the polypeptide of SEQ ID NO: 2 fused in frame with a ~~second~~ polypeptide having cytosine deaminase activity, wherein the fusion protein has neither uracil phosphoribosyltransferase nor thymidine kinase activity.

13. (Previously Presented) An isolated recombinant vector comprising the nucleotide sequence according to claim 12, placed under the control of elements which are sufficient for expression of the nucleotide sequence in a host cell.

14. (Previously Presented) The isolated recombinant vector according to claim 13, wherein said vector is selected from the group consisting of plasmid and viral vectors.

15. (Currently Amended) The composition according to ~~claim 53~~claim 54, wherein said substance which improves the transfectional efficacy and/or the stability of the vector is selected from the group comprising cationic lipids, cationic polymers, lysophospholipides and polypeptides.

16. (Previously Presented) The isolated recombinant vector according to claim 14, wherein said vector is a viral vector.

17. (Previously Presented) The isolated recombinant vector according to claim 16, wherein said vector is obtained from a Modified Vaccinia Ankara (MVA) virus.

18. (Previously Presented) The isolated recombinant vector according to claim 17, wherein said nucleotide sequence is inserted at a site of a naturally occurring deletion within the MVA genome selected from the group consisting of deletion I, II, III, IV, V and VI.

19. (Previously Presented) The isolated recombinant vector according to claim 18, wherein the site of the naturally occurring deletion is deletion III.

20. (Previously Presented) The isolated recombinant vector according to claim 13, wherein the elements which are sufficient for the expression of the nucleotide sequence comprise a promoter.

21. (Previously Presented) The isolated recombinant vector according to claim 20, wherein the promoter is the promoter of the thymidine kinase 7.5K gene.

22. (Previously Presented) The isolated recombinant vector according to claim 16, wherein said vector is an adenoviral vector which lacks all or part of at least one region which is essential for replication, wherein said region is selected from the group consisting of the El, E2, E4 and L1-L5 regions.

23. (Previously Presented) The isolated recombinant vector according to claim 22, wherein said vector is an adenoviral vector which additionally lacks all or part of the non-essential E3 region.

24. (Previously Presented) The isolated recombinant vector according to claim 20, wherein said promoter is the cytomegalovirus (CMV) early promoter.

25. (Previously Presented) The isolated recombinant vector according to claim 13,

further comprising one or more genes of interest, wherein said genes of interested are selected from the group consisting of genes encoding interleukins IL-2, IL-4, IL-7, IL-10 and IL-12, interferons, tumor necrosis factor (TNF), colony stimulating factors (CSF) and factors acting on angiogenesis.

26. (Previously Presented) The isolated recombinant vector according to claim 25, wherein the gene of interest encodes a polypeptide selected from the group consisting of IL-2 and INFγ.

27. (Previously Presented) A process for preparing a viral particle, wherein:

(i) the recombinant vector according to claim 13 is introduced into a complementing cell which is able to complement said vector in trans so as to obtain a transfected complementing cell,

(ii) said transfected complementing cell is cultured under conditions which are appropriate for enabling said viral particle to be produced, and

(iii) said viral particle is recovered from the cell culture.

28. (Previously Presented) An isolated viral particle comprising a recombinant vector according to claim 13.

29. (Previously Presented) An isolated host cell comprising a nucleotide sequence according to claim 12.

30. (Withdrawn) A composition which comprises a polypeptide according to claim 1 in combination with a pharmaceutically acceptable excipient.

31. (Withdrawn) A composition according to claim 30, further comprising a second polypeptide of interest.

32-34. (Canceled).

35. (Withdrawn) A method for treating a disease by gene therapy, wherein a nucleotide sequence according to claim 12 is administered to an organism or a host cell

which is in need of such a treatment.

36. (Withdrawn) A method according to claim 35, wherein pharmaceutically acceptable quantities of a prodrug, are administered to said host organism or cell.

37. (Withdrawn) A method according to claim 35 wherein said disease is selected from the group consisting of cancers, tumors and diseases which result from unwanted cell proliferation.

38. (Withdrawn) A polypeptide according to claim 6, wherein the native CDase is encoded by the *Saccharomyces cerevisae FCY1* gene.

39. (Previously Presented) An isolated viral particle which was obtained in accordance with the process according to claim 27.

40. (Previously Presented) An isolated host cell comprising the recombinant vector according to claim 13.

41. (Previously Presented) An isolated host cell which is infected with the viral particle according to claim 28.

42. (Previously Presented) A composition comprising the nucleotide sequence according to claim 12, in combination with a pharmaceutically acceptable excipient.

43. (Previously Presented) The composition according to claim 42, further comprising a second nucleotide sequence of interest that encodes IL-2 or INFγ.

44. (Previously Presented) A composition comprising the recombinant vector according to claim 13, in combination with a pharmaceutically acceptable excipient.

45. (Previously Presented) A composition comprising the viral particle according to claim 28, in combination with a pharmaceutically acceptable excipient.

46. (Previously Presented) A composition comprising the host cell according to claim 29, in combination with a pharmaceutically acceptable excipient.

47. (Withdrawn) A composition according to claim 31 wherein said second polypeptide of interest is selected from IL-2 and IFNγ.

48. (Withdrawn) A method for treating a disease by gene therapy, wherein a recombinant vector according to claim 13 is administered to an organism or a host cell which is in need of such treatment.

49. (Withdrawn) A method for treating a disease by gene therapy, wherein a viral particle according to claim 28 is administered to an organism or a host cell which is in need of such treatment.

50. (Withdrawn) A method for treating a disease by gene therapy, wherein a host cell according to claim 29 is administered to an organism or a host cell which is in need of such treatment.

51. (Withdrawn) A method according to claim 36, wherein said prodrug is an analog of cytosine.

52. (Withdrawn) A method according to claim 51, wherein the cytosine analog is 5-FC.

53. (Currently Amended) The ~~polypeptide~~ isolated nucleotide sequence of claim 12, wherein the fusion protein is SEQ ID NO: 1.

54. (Previously Presented) A composition comprising the isolated recombinant vector according to claim 14, and one or more substances which improve(s) the transfectional efficacy and/or the stability of the vector.

55. (Previously Presented) The viral vector according to claim 16, wherein said viral vector is obtained from a virus selected from the group consisting of a pox viruses,

adenoviruses, retroviruses, herpes viruses, alphaviruses, foamyviruses or adenovirusassociated viruses.